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PATENT APPLICATION TRANSMITTAL LETTER

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Docket No.
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Transmitted herewith for filing under 35 U.S.C. 111 and 37 C.F.R. 1.53 is the patent application of:

ARTHUR L. GAUDETTE

For: **INDICATING THE DIFFERENCES BETWEEN INTERNET WEB PAGES**

Enclosed are:

- ☒ Certificate of Mailing with Express Mail Mailing Label No. EL515089983US
- ☒ Six (6) sheets of drawings.
- ☐ A certified copy of a application.
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jc530 U.S. PTO
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Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
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Dated: January 31, 2000

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APPLICATION

FOR

UNITED STATES LETTERS PATENT

TITLE: **INDICATING THE DIFFERENCES BETWEEN**
 INTERNET WEB PAGES

INVENTOR: **ARTHUR L. GAUDETTE**

Express Mail No.: EL515089983US

Date: January 31, 2000

INDICATING THE DIFFERENCES BETWEEN INTERNET WEB PAGES

Background

This invention relates generally to Internet browsers.

Internet browser software generally provides a window which enables the user to provide input commands for viewing Internet web pages. A number of users use a bookmark or favorite system to link quickly to web pages of interest. Thus, the user may repeatedly return to a given web page to determine whether new information is available. Sometimes web pages indicate new information by highlighting or otherwise pointing to information which is changed.

However, in many cases, the user is forced to scan through one or more pages at a given web site to determine whether there is any new information which may be of interest to the user. This can be a time consuming and laborious job.

Thus, there is a need for a simpler way to determine the differences between web pages over time.

Summary

In accordance with one aspect, a method includes causing a processor-based system to difference a cached and current version of an Internet web page. The difference between the cached and current versions is then indicated.

Other aspects are set forth in the accompanying detailed description and claims.

Brief Description of the Drawings

Figure 1 is a depiction of an exemplary web page;

5 Figure 2 is a later version of the exemplary web page shown in Figure 1;

Figure 3 is a depiction of a web browser display achieved by differencing the pages shown in Figures 1 and 2;

10 Figure 4 is a flow chart for software for implementing one embodiment of the present invention;

Figure 5 is a block diagram of a processor-based system in accordance with one embodiment of the present invention; and

15 Figure 6 is a view of a web browser navigation bar in accordance with one embodiment of the present invention.

Detailed Description

In accordance with one embodiment of the present invention, a web browser may include software to enable the
20 differencing or subtraction of a cached web page from a currently available web page. Using the differencing functionality, one can determine what new features have been added to a given web page. This avoids the need to carefully scrutinize the new page and to manually compare
25 it to the cached version of the web page.

For example, in one embodiment of the present invention, at the click of a mouse button, one can determine what are the differences between the old and new versions. The viewer can then examine only the changes to
5 find the new information.

Referring to Figure 1, an earlier version of an exemplary web page is illustrated. This page may be cached by the web browser. Figure 2 illustrates a later version of the same web page. Referring to Figure 6, a browser
10 navigation bar may include an icon labeled "subtract". When the user selects the subtract icon on the browser window navigation bar, the cached web page, illustrated in Figure 1, may be differenced or subtracted from a current web page indicated in Figure 2. The result is the
15 difference between the cached and current web pages. The differences may be displayed as indicated in Figure 3.

Thus, in one embodiment of the present invention, when the user operates the navigation bar subtract icon, the cached version of a web page and the currently displayed
20 version are automatically subtracted. As a result, only the new material contained in the current version is displayed, as illustrated in Figure 3.

Referring to Figure 4, the user initially launches a current web page as indicated in block 10. The browser
25 then loads the current page from the web server as indicated in block 12. When the user mouse clicks on the

subtract icon as indicated in block 14, the software compares the cached image for that web page to the current server image in one embodiment of the present invention. A display with the repeated information blanked may show only the new information, as indicated in block 16.

In one embodiment of the present invention, the software may be provided as a plug-in to an existing browser. In another embodiment of the present invention, the browser software may be originally provided with the subtract or differencing functionality.

With the subtract functionality, the user then has the option to toggle between a display which shows only the new information, such as Figure 3, and the current web page (block 18, Figure 4). This toggling may be implemented for example by repeatedly mouse clicking on the subtract icon on a navigation bar, for example. Selecting the subtract icon the first time may display the difference image. Selecting the icon again returns the display to the current server image.

Referring to Figure 5, a processor-based system 22 includes a processor 24 coupled to a chipset 26 in one embodiment of the present invention. The chipset 26 may couple a system memory 28, a graphics accelerator 30 and a display 32. In addition, the chipset 26 may be coupled to a bus 34 in turn coupled to an interface 36 which may be part of a chipset. The interface 36 in turn couples a hard

disk drive 38 which may store the software 20. The software 20 may, in one embodiment of the present invention, be an embodiment of a web browser or may be plug in software which operates with an existing web browser.

5 Comparison software is commercially available. For example, the Netscape Web Publisher compares different versions of a file. The output is a hypertext mark up language (HTML) file displayed in a web browser window that highlights where the versions differ.

10 Instead of merely displaying only the new material, the new material may be displayed in a highlighted fashion. For example, new material may be underlined or may be displayed in different color so that the viewer can see the new material on the display of the current web page.

15 In still another alternative, instead of responding to the user's selection of an icon, the system may automatically provide an indication of the differences between the two web pages. For example, in one embodiment of the present invention, the current web page is
20 initially, automatically displayed with highlighting, indicating the new material added to the cached web page. This avoids the need for the user to select the differencing functionality and still allows uninterrupted viewing of the current version of the web page.

25 In still another embodiment of the present invention, instead of displaying only the new material, in one

embodiment of the present invention, the new material may be displayed in one way and any deleted material may be displayed in another way. For example, in one embodiment of the present invention, new material may be indicated in one color and deleted material may be indicated in a different color.

As yet another embodiment of the present invention, the differencing software may determine whether there are different links provided in a new version of the web page. Thus, the new links, indicated by uniform resource locators, may be identified separately from other changes in response to a user inquiry. As still another alternative, any new links may be highlighted in a special way, such as by a distinct color.

As still another embodiment of the present invention, in connection with web pages which provide chat or feedback information, any new feedback responses, which have been received since the last time the responses were checked by a user, may be highlighted or otherwise indicated. For example, in connection with stock comment pages, users may provide a running commentary of chat responses or messages on a given topic about a given stock. Instead of requiring the user to remember the user's last viewed response in the series of responses, a differencing mechanism may be utilized to determine the difference between the information last contained on the page and the information

now on the page. Instead of displaying all of the information, the user may be provided with a list of only those new comments received after the user last checked the page.

5 If desired, the software 20 may also automatically or selectively cache each viewed page. This may ensure that a given page is available for subsequent comparison.

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15 While the present invention has been described with respect to a limited number of embodiments, those skilled in the art will appreciate numerous modifications and variations therefrom. It is intended that the appended claims cover all such modifications and variations as fall within the true spirit and scope of this present invention.

20 What is claimed is:

1 1. A method comprising:
2 causing a processor-based system to difference a
3 cached version and a current version of an Internet web
4 page; and
5 indicating the difference between said cached and
6 current versions.

1 2. The method of claim 1 wherein indicating includes
2 causing the difference between said cached and current
3 version to be displayed.

1 3. The method of claim 2 wherein indicating the
2 difference includes blanking the common material between
3 the cached and current versions.

1 4. The method of claim 1 wherein causing a
2 processor-based system to difference the cached version and
3 the current version includes providing a user selectable
4 graphical button image and enabling the user to select the
5 button image to cause a processor-based system to
6 difference a cached version and a current version.

1 5. The method of claim 1 further including providing
2 a graphical user interface of a navigation bar with a
3 subtract button image.

1 6. The method of claim 5 including causing the
2 system to difference a cached version and a current version
3 when the button image is mouse clicked on.

1 7. The method of claim 1 further including enabling
2 the user to toggle between indicating the difference
3 between said cached and current versions and indicating the
4 current version.

1 8. An article comprising a medium for storing
2 instructions for causing a processor-based system to:
3 difference a cached version and a current version
4 of an Internet web page; and
5 indicate the difference between said cached and
6 current versions.

1 9. The article of claim 8 further storing
2 instructions that cause a processor-based system to cause
3 the difference between said cached and current versions to
4 be displayed.

1 10. The article of claim 9 further storing
2 instructions that cause a processor-based system to blank
3 the common material between the cached and current
4 versions.

1 11. The article of claim 8 further storing
2 instructions that cause a processor-based system to provide
3 a user selectable graphical button image and enable the
4 user to select the button image to cause a processor-based
5 system to difference a cached version and a current
6 version.

1 12. The article of claim 8 further storing
2 instructions that cause a processor-based system to provide
3 a graphical user interface of a navigation bar with a
4 subtract button image.

1 13. The article of claim 12 further storing
2 instructions that cause a processor-based system to
3 difference a cached version and a current version when the
4 button image is mouse clicked on.

1 14. The article of claim 8 further storing
2 instructions that cause a processor-based system to enable
3 the user to toggle between indicating the difference
4 between said cached and current versions and indicating the
5 current version.

1 15. A system comprising:
2 a processor;
3 a storage coupled to said processor; and

4 said storage storing instructions that cause a
5 processor-based system to difference a cached and a current
6 version of an Internet web page and indicate the difference
7 between said cached and current versions.

1 16. The system of claim 15 wherein said storage
2 stores instructions for causing a button image to appear in
3 a browser window which when clicked on automatically causes
4 the cached version and the current version of an Internet
5 web page to be differenced.

1 17. The system of claim 16 including a display
2 coupled to said processor, said storage storing
3 instructions that cause the difference between said cached
4 and current version to be displayed on said display.

1 18. The system of claim 16 wherein said image may be
2 mouse clicked on to select a feature associated with said
3 image.

1 19. The system of claim 17 wherein said storage
2 stores instructions that cause a processor-based system to
3 enable the use to toggle between indicating the difference
4 between said cached and current versions and indicating the
5 current version.

1 20. The system of claim 15 wherein said storage
2 stores instructions that cause the processor to enable the
3 user to select a button image to cause a processor-based
4 system to difference the cached and current versions.

INDICATING THE DIFFERENCES BETWEEN INTERNET WEB PAGES

Abstract of the Disclosure

Software may be provided for indicating the difference between an earlier cached version and a current version of a web page. This saves the user the trouble of comparing the two pages to determine whether there are changes that would be of interest. For example, in one embodiment of the present invention, the navigation bar of a web browser may include a button to allow the user to select a subtract or differencing feature. Once selected, the current version of a display web page is compared to a cached version of the web page and any differences are either highlighted or displayed.

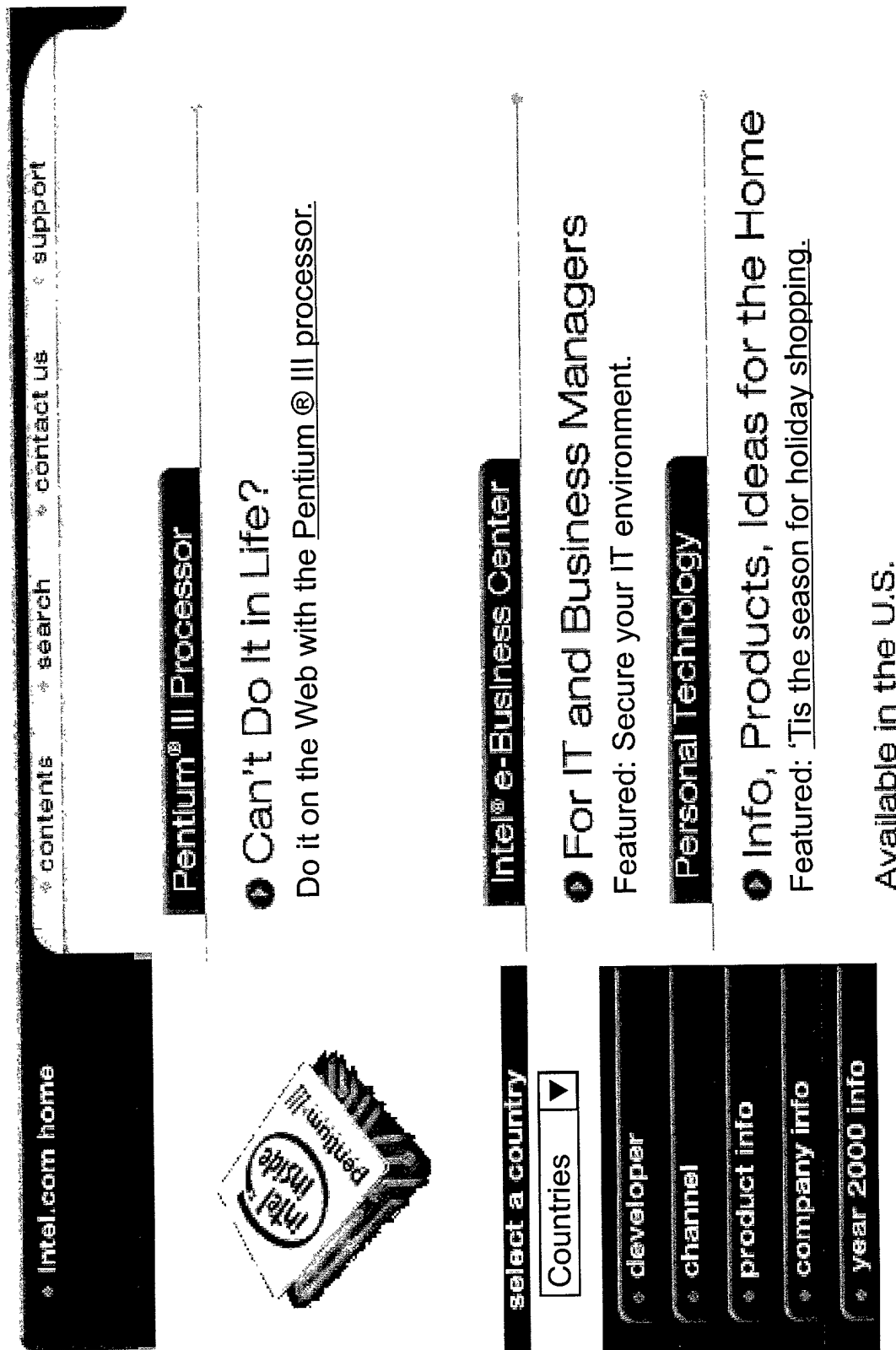
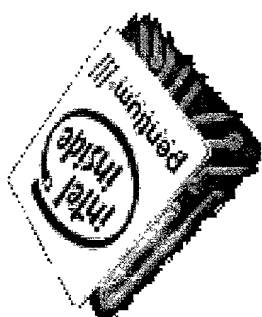


FIG. 1

[Intel.com home](#)

[contents](#)
[search](#)
[contact us](#)
[support](#)



Pentium® III Processor

[▶ Can't Do It in Life?](#)
 Do it on the Web with the [Pentium® III processor](#).

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 Experience the next generation of [Web sites and tools](#).

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[* developer](#)

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[* product info](#)

[* company info](#)

[* year 2000 info](#)

FIG. 2



Experience the next generation
of Web sites and tools.

FIG. 3

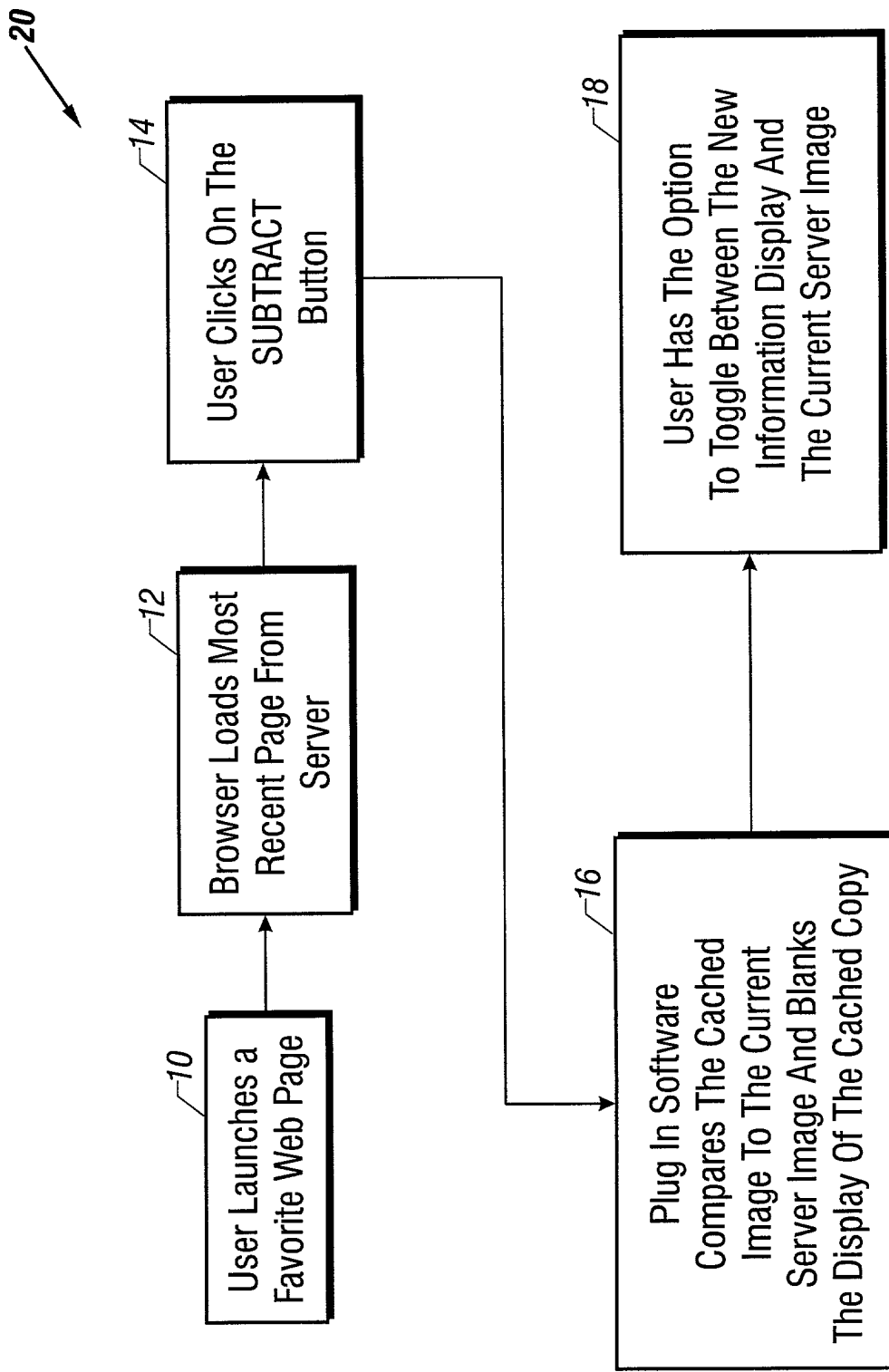


FIG. 4

FIG. 5 is a block diagram of a system 22. The system 22 includes a first module 24, a second module 26, a third module 28, a fourth module 30, a fifth module 32, a sixth module 34, a seventh module 36, an eighth module 38, and a ninth module 20. The first module 24 is connected to the second module 26. The second module 26 is connected to the third module 28. The third module 28 is connected to the fourth module 30. The fourth module 30 is connected to the fifth module 32. The fifth module 32 is connected to the sixth module 34. The sixth module 34 is connected to the seventh module 36. The seventh module 36 is connected to the eighth module 38. The eighth module 38 is connected to the ninth module 20.

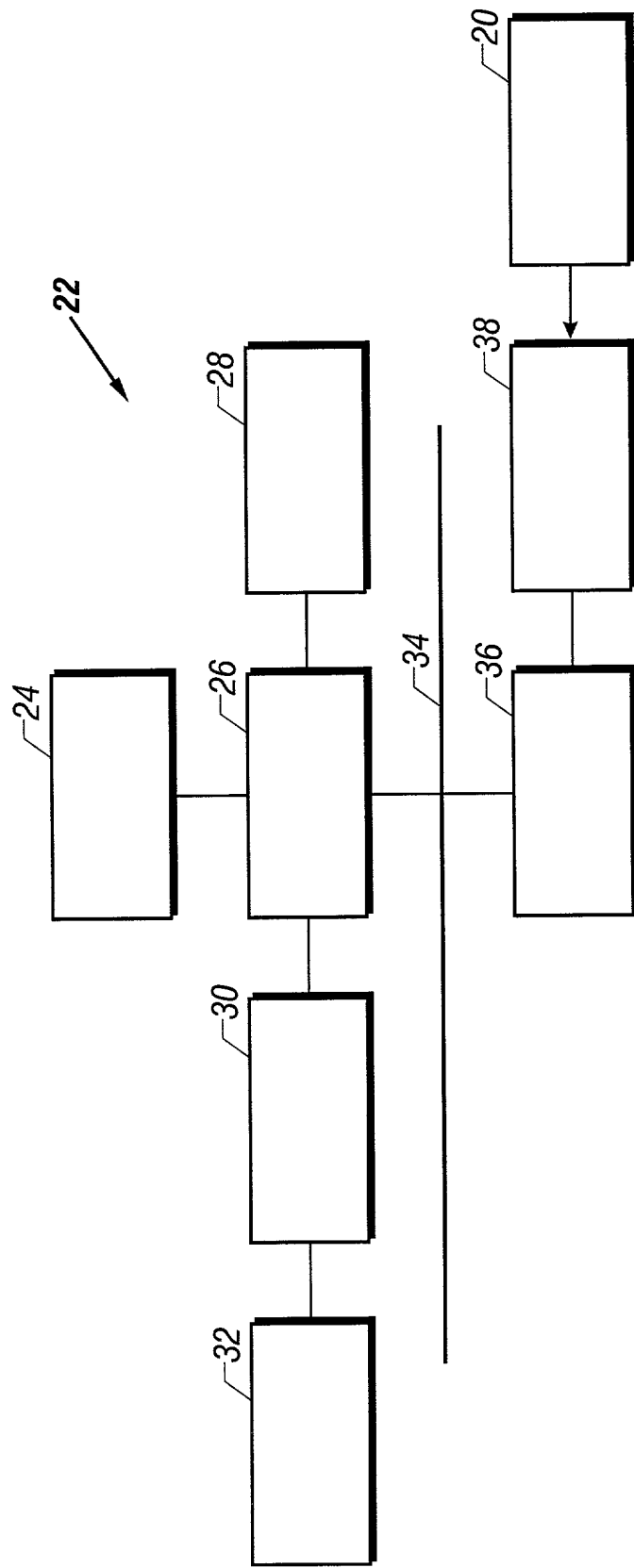


FIG. 5

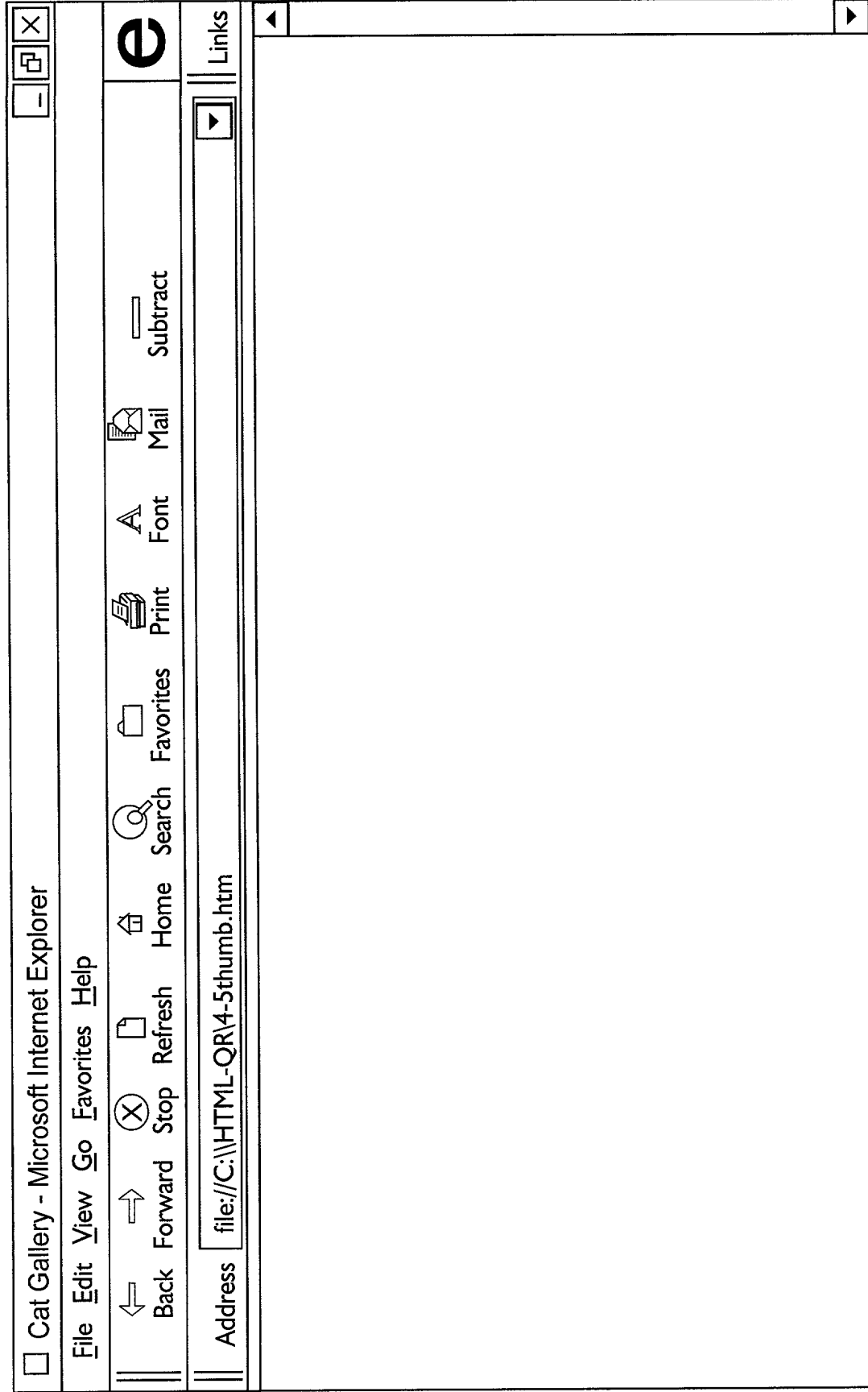


FIG. 6

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

INDICATING THE DIFFERENCES BETWEEN INTERNET WEB PAGES

the specification of which

X	is attached hereto.
	was filed on _____ as
	United States Application Number _____
	or PCT International Application Number _____
	and was amended on _____
	(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, and that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>Prior Foreign Application(s):</u>			<u>Priority Claimed</u>	
Number	(Country)	(Day/Month/Year Filed)	Yes	No
Number	(Country)	(Day/Month/Year Filed)	Yes	No
Number	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under title 35, United States Code, Section 119(e) of the United States provisional application(s) listed below:

_____ (Application Number)	_____ (Filing Date)
_____ (Application Number)	_____ (Filing Date)

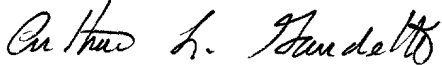
I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

_____ (Application Number)	_____ Filing Date	_____ (Status-patented, pending, abandoned)
_____ (Application Number)	_____ Filing Date	_____ (Status-patented, pending, abandoned)

I hereby appoint Timothy N. Trop, Reg. No. 28,994; Fred G. Pruner, Jr., Reg. No. 40,779, Dan C. Hu, Reg. No. 40,025; Coe F. Miles, Reg. No. 38,559, and John R. Merklings, Reg. No. 31,716 my patent attorneys, of TROP, PRUNER, HU & MILES, P.C., with offices located at 8554 Katy Freeway, Ste. 100, Houston, TX 77024, telephone (713) 468-8880, and Joseph R. Bond, Reg. No. 36,458; Richard C. Calderwood, Reg. No. 35,468; Sean Fitzgerald, Reg. No. 32,027; David J. Kaplan, Reg. No. 41,105; Leo V. Novakoski, Reg. No. 37,198; Naomi Obinata, Reg. No. 39,320; Thomas C. Reynolds, Reg. No. 32,488; Steven P. Skabrat, Reg. No. 36,279; Howard A. Skaist, Reg. No. 36,008; Steven C. Stewart, Reg. No. 33,555; Raymond J. Werner, Reg. No. 34,752; and Charles K. Young, Reg. No. 39,425; my patent attorneys, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Send correspondence to Timothy N. Trop, TROP, PRUNER, HU & MILES, P.C., 8554 Katy Freeway, Ste. 100, Houston, TX 77024 and direct telephone calls to Timothy N. Trop, (713) 468-8880.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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